



# **THE STATE OF THE ENERGY AND EXTRACTIVE SECTORS OF GHANA:** CRITICAL REFORMS REQUIRED FOR SUSTAINABLE ECONOMIC RECOVERY

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# CONTENTS

TABLE OF CONTENTS	1
SUMMARY OF ISSUES	2
1.0 BACKGROUND	4
2.0 PETROLEUM PRODUCT PRICING	5
3.0 THE POWER SECTOR	7
3.1 CASH WATERFALL MECHANISM	7
3.2 THE ESLA PLC AND ENERGY DEBT SETTLEMENT	8
3.3 RELOCATION OF POWER PLANTS	10
4.0 UPSTREAM OIL AND GAS SECTOR	11
4.1 LIMITED ACTIVITY IN THE UPSTREAM OIL AND GAS SECTOR	11
4.2 GNPC 7% ACQUISITION IN JUBILEE AND TEN	14
5.0 GAS SECTOR PRIORITIES FOR GHANA	16
DAMPENING INVESTMENT IN DOMESTIC GAS SOURCES	16
PRICE RISKS OF LNG	18
6.0 INSTITUTIONAL INEFFICIENCY	20
7.0 NEW TREND OF STATE PARTICIPATION IN THE MINING SECTOR	23
GIADEC	23
GISDEC	24
MIIF	24
8.0 CONCLUSION AND RECOMMENDATION	26
PETROLEUM PRICES	26
POWER SECTOR	27
UPSTREAM INVESTMENTS	27
GAS SECTOR	28
INSTITUTIONAL EFFICIENCY	28
STATE PARTICIPATION IN THE MINING SECTOR	28

# Summary of Issues

1. The challenges in the energy and extractives sector contribute significantly to the current economic challenges in Ghana. Consequently, efforts at economic recovery may not succeed without addressing the key challenges that plague the sectors.
2. The recent increases in petroleum prices send a significant shock to various sectors of the economy because of the overreliance on petroleum products for transportation and almost nonexistent alternatives. Therefore, the government is required within its fiscal constraints to critically examine further the taxes and margins to lessen the burden on consumers to encourage economic growth.
3. The power sector under-recoveries undermine the economic development of the country. For example, in 2020 and 2021, the government's settlement for the energy sector under-recoveries was over GHS 14 billion (GHS 6.8 billion in 2020, and cedi equivalent of \$1.257 billion in 2021).
4. The inability to control the under-recoveries undermines the objective of ESLA to address legacy debts. Currently, levies paid under ESLA barely settle coupon payments, transaction and administrative costs. Outstanding bonds to be settled at maturity amounts to about GHS 8.7 billion.
5. The limited activity in the upstream oil and gas sector undermines the sector's contribution to government revenue and general economic growth. The year-on-year decline in production signals the urgent need for policy and regulatory reforms to encourage investment in the sector.
6. The National Oil Company's acquisition of 7% in Jubilee and TEN fields is positive; however, the attempt to hide the stakes (about \$300 million cashflows) in a tax haven and outside the Petroleum Revenue Management Act (PRMA) undermines the government's effort to plug the budget deficit.
7. Significant investments in the gas sector are required to convert flared gas to economic value. For example, between 2019 and 2021, about 47 bcf of gas was flared, equivalent to about \$300 million in value.

8. The uncontrolled focus on Liquefied Natural Gas (LNG) imports risks investment attraction in the gas sector to convert flared gas into economic value and the government's desire to use gas as a transition fuel. Again, price volatility in the LNG market could constrain the management of the power sector debt if tariffs are not frequently adjusted to account for price movements.

9. In 2020, the energy sector State Owned Enterprises (SOEs) incurred a loss of about GHS 9.19 billion (accounting for the government's grant of GHS 6.8 billion to ECG). Institutional inefficiencies (political appointments, bloated staff strength) and the lack of accountability by management and boards contribute significantly to the losses made by the state institutions.

10. The new trend of state participation in the mining sector raises significant risks of investing tax revenue, given the horrendous history of state ownership and government participation. In 2020, the government's exposure through the SOEs was about GHS 21 billion, representing about 30% of Ghana's domestic revenue, 6% of nominal GDP, and 700% of capital investment in agriculture, education, health, roads, and gender. This situation questions the government's decision to expand the number of SOEs.

# 1.0 Background

Ghana, like many economies, has faced external pressures from the Covid-19 pandemic and other geopolitical events. The events have fueled the recent price hikes of crude oil on the international market. Additionally, the global logistics value chain has witnessed a sustained high cost of freight for almost two years within the Covid periods. For example, the cost of shipping a 40 feet container from Asia to Ghana has increased from \$2,000 before the Covid 19 pandemic to about \$10,000 by December 2020 and has since remained high. Beyond the nominal increases, government taxes, calculated on the Cost, Freight and Insurance (CIF) value of imports, impose a further burden on importers.

These external phenomena create significant inflationary pressures for an import-dependent Ghana, manifesting in an increased capital requirement for imports and attendant pressure on the local currency. Therefore, it is not surprising that Ghana Statistical Service (GSS) quotes average inflation at 19.4% for March 2022.

In developed economies, a range of economic stimuli has been availed to support businesses and individuals to soothe the effects of global events, particularly on low-income earners and to recalibrate growth through policies that allow them to keep more of their money. The case of Ghana is very much the reverse. The double dose of external and internal economic difficulties constrains the ability of the government to intervene in similar terms. Conversely, the government demands more money from the public through a raft of measures to support revenue mobilisation matched by modest expenditure rationalisation.

ACEP takes the view that the inability of the government to intervene substantially in the economic challenges faced by the public is sustained by inefficiencies and poor choices in public policy and action/inactions, to which the energy and extractive sectors are significant contributors. The inefficiencies in the energy and extractive sectors introduce greater rigidities in the tax burden on the population and require special attention and considerable policy reversals by the government, without which the measures advocated to resolve the economic challenges are rendered ineffective. We discuss some of the issues below for the government's attention.

## 2.0 Petroleum Product Pricing

External and domestic factors determine petroleum pump prices. The primary determinant of price movement from the external environment is the crude oil price, which the government does not control. This year, the global oil price has escalated from about \$75 to a high of \$127 per barrel. Although there has been a recent decline to about \$105 per barrel, the price movement remains volatile in the face of the escalating conflict between Russia and Ukraine and the attendant speculative market environment. The major domestic factors are the exchange rate and the taxes and margins imposed by the government and state institutions.

In the recent interventions announced by the Minister of Finance, he proposed a reduction of GHp15 per litre on some margins on petrol and diesel from 1st April 2022. This is a cumulation of GHp 9 from the BOST margin, GHp 2 reduction from the Unified Petroleum Pricing Fund (UPPF), GHp 1 from the Fuel Marking Margin and GHp 3 from the Primary Distribution Margin (PDM). Understandably, the Minister was constrained to touch the taxes and levies as is being done by advanced countries. In a similar response, the UK reduced duty on petroleum products by 5 pence per litre (about GHp 48). Germany also reduced taxes on petrol and diesel by 30 Euro cents (about GHS 2.4) and 14 Euro cents (about GHS 1.13), respectively. Two reasons primarily account for Ghana's inability to pass on similar relief to the public.

**1. The taxes are locked to inefficient debt management and institutions.** Petroleum tax finances development in most parts of the world. However, in Ghana, petroleum taxes finance past and recurrent inefficiencies. In 2015, the Energy Sector Recovery Levies Act (ESLA) was passed to generate revenue to pay off outstanding debt accumulated through petroleum under-recoveries during the regulated regime and power sector debts accumulated during the power crisis of the same period. The definite quantum of debt that could have been amortised over five years has become a national albatross with no end in sight. This is because debt accumulation has not been controlled, and debt repayment appears normalised through the establishment of ESLA PLC to manage the energy sector debt.

Again, the margins charged on petroleum products which add up to GHp53 per litre of fuel, only prop the inefficiency of state institutions and political patronage that further burdens the consumer at the pump. Last year, ACEP showed that in an efficient market system, the BOST margin, UPPF, PDM and the Fuel Marking Margin (FMM) are unnecessary burdens on the consumer. BOST currently operates as a commercial entity, charging commercial rates as its competitors in the space. Therefore, the consumer is charged twice; the commercial rate, which is passed on to the consumer, and the GHp9 BOST margin per litre. Additionally, it creates unfair competition against similar market players in the country.

The PDM and UPPF can be determined through auctioning within the context of a deregulated market to achieve a market rate. This measure will eliminate the inefficiencies currently identified in the deployment of the margins, particularly the PDM, which breeds political intermediaries for the transportation of products at the expense of the consumer.

**2. The country's economic conditions:** Many have called for the suspension of the Special Petroleum Tax (SPT) to relieve consumers in the current challenging period. This argument hinges on the fact that Ghana is a net exporter of petroleum and, therefore, could transmit the benefits from upstream to lessen the burden on consumers at the pump. However, the Minister of Finance has indicated that “...The purported windfall gain in foreign exchange is a mirage....” The Minister's assertion is borne of the fact that the government's share of the total exports of crude is less than the total import of petroleum products.

ACEP believes that the right analysis is for the government to compare the windfall on Ghana's share of crude exports to the petroleum taxes that would be forgone on downstream products if the SPT was removed. At an assumed oil price of \$90<sup>1</sup> per barrel (deliberately conservative), Ghana's windfall for 2022 is about \$470 million, representing a 47% increase in projected receipts from crude oil. The \$470 million, which is the excess of projection, will be split into the stabilisation and heritage funds in compliance with the Petroleum Revenue Management Act (PRMA). The implication is that 70% of the windfall (GHS2.3 billion), which will be in excess of the cap on the stabilisation fund, will be available for debt servicing and contingency. This figure more than offsets the outstanding collection from the SPT in 2022. The SPT was estimated to yield about GHS 2.5 billion for 2022, translating to about GHS 1.9 billion for the remaining three quarters to be collected. It is, therefore, a choice for the government to make; whether to pass on the relief to the public. It has nothing to do with the trade balance of petroleum products.

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<sup>1</sup> This is a conservative estimate. EIA estimates an average crude price of \$105 per barrel for 2022 and \$89 per barrel in 2023. <https://www.eia.gov/outlooks/steo/>



## 3.0 The Power Sector

The power sector challenges, which have persisted for over a decade, continue to receive piecemeal attention to the critical solutions required to ensure a sustainable and robust sector that transmits value to the state and the consumer. After failing to attract investment into the distribution subsector under the Millennium Challenge Corporation (MCC) Compact II in 2018, various promises to reintroduce the private sector have not been kept. As a result, the needed investment to improve the efficiency of electricity distribution and revenue collection has not been availed to the sector. Consequently, the technical and financial challenges have led to persistent localised faults and outages, and access constraints for new consumers, while the country pays for idle capacity.

It is evident that the government's current approach to resolving the distribution challenges is to allow ECG to reform itself and manage the challenges. This has always been an option, but the perennial intervention of the political class has made the option unsustainable. Since 2014, the quality of management (expressed through political interference) has been one of the major problems identified with ECG. Over time, the poor management has sustained the financial and technical challenges. Therefore, a government-controlled management structure is likely to fail. In 2021, ECG and the Ministry of Energy established a joint revenue taskforce to enhance revenue collection. However, the task force struggles to manage the non-payment of bills by government agencies and politically connected business.

### 3.1 Cash Waterfall Mechanism

The government of Ghana has instituted the cash waterfall mechanism to ensure equitable distribution of revenue among the various parties in the power sector – generation companies, the transmission company, fuel suppliers and regulatory fees. This mechanism was to avert the practice of the unfair distribution of the insufficient revenues collected by ECG. The mechanism has been positive thus far. However, the fundamental challenge of poor revenue performance plagues the sector. In 2021, the cash waterfall mechanism could only settle about GHS5.2 billion, less than 50% of the payment requirements for the value chain.

Consequently, the additional intervention of about \$1.25 billion (GHS 7.13 billion) was required from the government to settle IPPs and gas purchases. Out of the \$1.25 billion, the Ministry of Finance paid about \$1.03 billion from an undisclosed source. The balance of about \$231 million paid for under-recoveries was raised through Bonds– \$68.7 million by the Ministry of Finance and \$161.9 million by ESLA PLC.



ACEP suspects that the undisclosed \$1 billion is the Eurobond funds raised to rationalise the power sector contracts under renegotiation were used to settle the under-recoveries. If the Eurobond was used to pay the under-recoveries for the year, then two critical questions remain;

1. How will the government pay for the contracts being renegotiated?
2. Where will the government get money to pay for 2022 imminent power sector shortfalls within the difficult economic context?

### 3.2 The ESLA PLC and energy debt settlement

To deal with the unsustainable energy sector debt burdens, the government imposed the Energy Debt Recovery Levy (EDRL) as part of the Energy Sector Levy Act (ESLA) on petroleum consumers. The EDRL was initially disbursed directly to the Energy Debt Service Account and the Power Generation Infrastructure Support Sub-account to defray the debts and foreign exchange under-recoveries from Tema Oil Refinery (TOR) and the power sector. In 2017, however, the government of Ghana incorporated ESLA PLC, a special purpose vehicle, to issue long term bonds to pay the outstanding debt on the books of the government agencies in the energy sector. Consequently, the government assigned its rights to the EDRL to ESLA PLC through the Ministry of Finance.

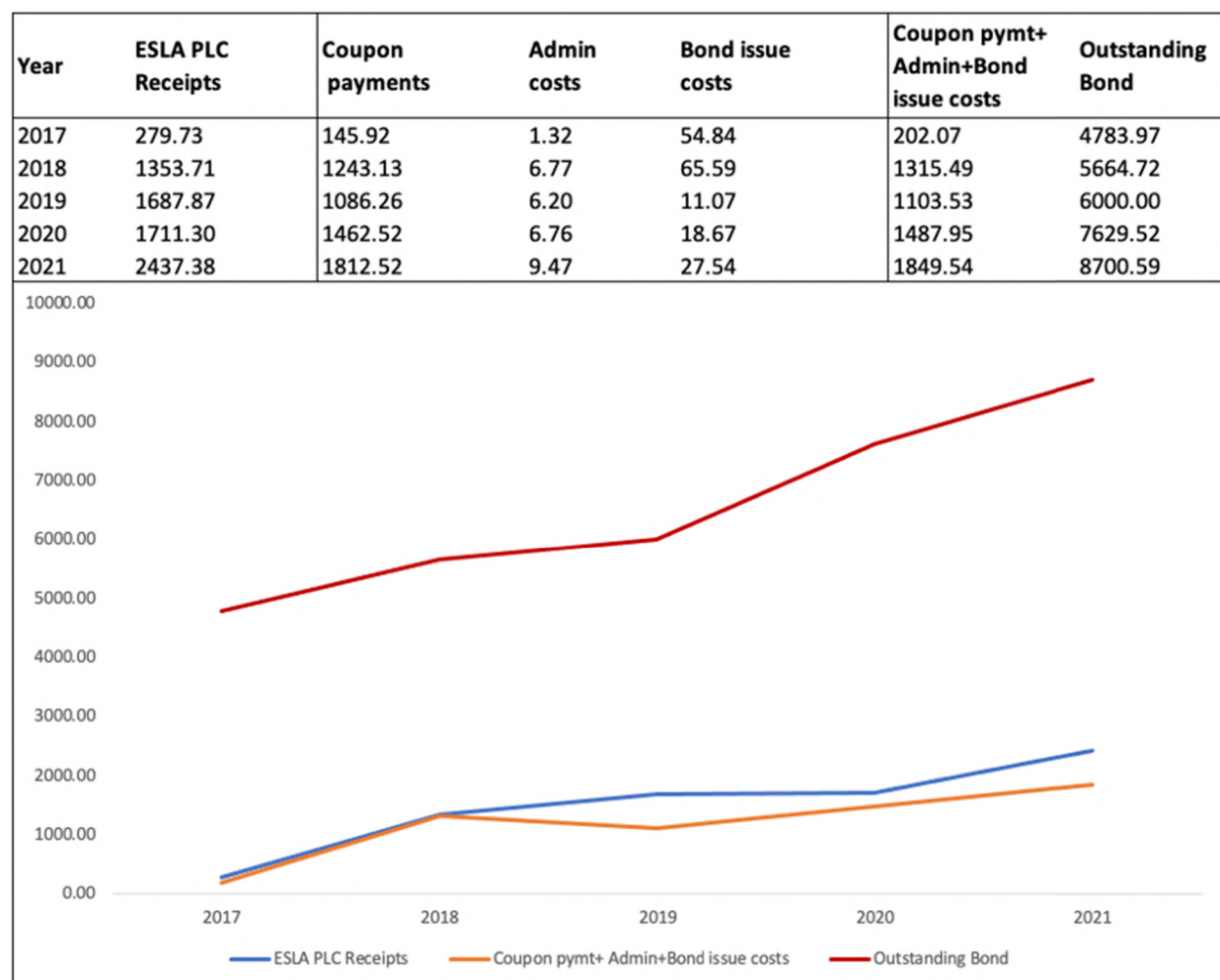
Between 2017 and 2021, ESLA PLC raised bonds of about GHS 8.7 billion. About GHS 8.06 billion of debt is reported to have been settled. However, ACEP is unsure about how much of the legacy debt and associated interest is outstanding due to unavailable comprehensive information on the total outlook of legacy debt. It also appears that ESLA PLC is not just dealing with legacy debt but is also paying for some of the recurrent under-recoveries. As indicated above, \$161.9 million was paid with ESLA bonds to settle recurrent debts owed to IPPs in 2021. **It is important to note that the debts have only moved from the books of the power sector entities to the bond market, while the liabilities sit with the public through the EDRL.**

ACEP notes that the ability of EDRL to retire the bonds at the end of the maturity is marginal, which makes it difficult to predict when the burden of energy sector levies will be lifted off the shoulders of consumers. **Currently, ESLA PLC's receivables are used mainly for coupon payments, to settle bond issuance charges and administrative expenses.**

Between 2017 and 2021, ESLA PLC received about GHS 7.4 billion as disbursement from the energy sector levies. ESLA PLC has spent about GHS 5.7 billion cumulatively, representing about 77% of total collections in making coupon payments to bondholders. Again, ESLA PLC's operations have introduced significant administrative and bond issuance costs, which are drawn from the disbursements from EDRL. Between 2017 and 2021, bond issue costs and administrative expenses amounted to about GHS 208 million.

The reality questions the EDRL's ability to defray the energy sector debts and clear the outstanding bonds when they are due. **At this current rate of coupon payments, bond issuance and buyback costs, administrative expenses and EDRL collections, the government may continue to settle outstanding bonds maturing in the short term with new bonds. This would generate a spiral of debts which ESLA was conceptualised to curb within five years.** At this rate, the ESLA levy may be increased to address the debt to the bond market and recurrent energy sector debts unless the government finds other means to absorb the shortfalls.

Figure 1: ESLA PLC receipts and outstanding bonds



**It is essential to highlight that ESLA was never a silver bullet to address the legacy debts even at its establishment.** As of the end of 2016, the energy sector debt was about GHS 10 billion with a renegotiated interest rate of 22% on the cedi values and 8.5% on the dollar values.<sup>2</sup> The trend shows that the EDRL collections were less than the interest payments on the legacy debts until 2019, when the collections rose marginally above the interest payments due to the increase in the levy, as indicated in Figure 1. ESLA was therefore meant to be a complement to other critical actions to reform the power sector. These include optimising tariff collection, reducing technical losses in power distribution, and ensuring investments along the value chain.

### 3.3 Relocation of power plants

In response to the power fluctuations in the middle belt, the government plans to relocate some plants to Kumasi. This planned relocation raises the question of whether it is the best option within the context of professed excess capacity, debt accumulation and transmission challenges. **It must be unequivocally stated that with a robust transmission system, transmitting power from the South to any part of the country is possible without the interruption being witnessed in the middle belt.** In the long term, the middle belt may require additional generation infrastructure. However, the current payment and debt crises in the power sector require that the most optimal decisions be made to reduce the sector's debt burden.

Sending generation plants to Kumasi does not resolve the need for improvement in the transmission infrastructure, which can solve the same problem in short to medium term. For example, GRIDCo requires investments to construct transmission lines from Pokuase to Kumasi to provide a more robust loop for the power system. Therefore, comparing the cost of relocation of power plants and fuel transportation infrastructure to the cost of investing in transmission infrastructure should inform the government's decision. However, thus far, there is no disclosure on the cost of plant relocations and their impact on electricity tariffs.

The reliability of the generation segment depends on adapting generation addition to more efficient and cost-effective systems, and not any plant available. Therefore, the suggested relocation of Ameri and AKSA plants may not be the most optimal decision given that they are old plants and may require medium to long term tariffs to offset the cost of relocation and provide long term reliable power supply.

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<sup>2</sup> Prior to the debt renegotiation, interest rates on the debts were about 32% on the cedi and 11% on the dollar.

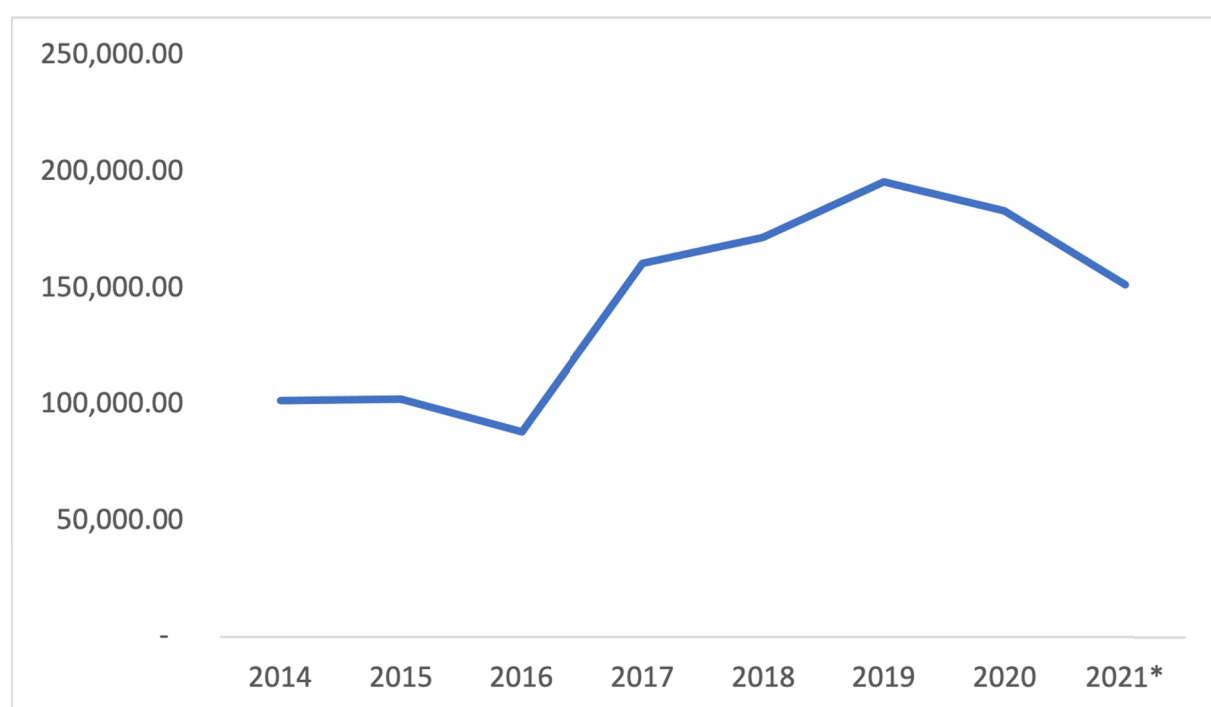
## 4.0 Upstream Oil and Gas Sector

The upstream oil and gas sector is critical for revenue generation and economic development. However, the sector has been challenged with inactivity and policy decisions that reverse its growth and accountability. These challenges are discussed in the following subsections.

### 4.1 Limited activity in the upstream oil and gas sector

Ghana's upstream sector has underperformed relative to expectations in the past years. Since the last oil field, Sankofa Gye Nyame (SGN), was added in 2017, no additional field development has been added to increase production or at least stabilise the existing production. Crude oil production has declined year-on-year after a peak in 2019 (See Figure 2). Consequently, there has been a dwindling contribution of the oil sector to GDP growth (-6% in 2020 and a projected -16% in 2021). These events have significant implications on the government's balance of payment and attendant negative impacts on the domestic currency. These implications should send signals for clearer and transparent rules of engagement to promote the growth of the oil sector.

Figure 2: Total crude oil production from 2014 to 2021



Regrettably, three potential projects could have been pursued more aggressively through enforcement, planning, and strategic engagements with industry players to increase oil production. The projects are Aker Energy's Deep Water Tano Cape Three Points (DWT/CTP) block, Eni's Cape Three Points (CTP) Block 4 and Springfield's Afina discoveries.

**1. DWT/CTP development-** The DWT/CTP block had initial timelines of 2022 to produce first oil. The initial Plan of Development (PoD) generated significant controversy regarding the many concessions government granted for the development of the field. As a result, Ghana amended its laws to allow Aker Energy, the operator of the field, to hold on to the oil block without relinquishment and limited the regulatory powers of the Petroleum Commission (PC) on the company's activities, including compliance with local content requirements. However, the company has not been able to submit an acceptable PoD for the development of the field, which was due in May 2019, having granted the concessions. The company subsequently declared force majeure in 2020 due to the Covid-19 pandemic and geopolitical tensions.

In July 2021, Aker Energy attempted to offload a significant stake in the DWT/CTP to GNPC in a bizarre cost padding arrangement that would have committed the country to about \$1.65 billion in cash and \$740 million for FPSO financing and prefinancing of some local partners. Interestingly, the government has not held the company accountable for the critical requirements of the Petroleum Agreement, leading to the consistent postponement of timelines for field development. The last timeline for PoD submission was in December 2021, proposed by Aker. In the latest update, Aker ASA,<sup>3</sup> in its 2021 fourth-quarter financial report, has communicated that Aker Energy is working to submit a new PoD by the summer of 2022, with a caveat that it is evaluating options for financing the project.

*“Aker Energy is evaluating different strategic options for its ownership in the DWT/CP block. In August 2021, the Ghanaian Parliament approved a mandate for GNPC to negotiate a transaction with Aker Energy regarding a potential acquisition of a stake in the DWT/CTP block.”*

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<sup>3</sup> Aker ASA owns 50.8% of Aker Energy

This statement by Aker ASA indicates that Aker Energy is still pursuing the sale of its assets to GNPC. The Minister of Energy also confirmed this at a press conference on 14th April 2022. Therefore, it does appear that as far as the development of the DWT/CTP block is concerned, Aker calls the shots.

ACEP's intelligence, however, indicates that the Bank of America's assessment of the transaction commissioned by the Ministry of Finance confirms Civil Society's position that it was unfavourable to the state. This affirms ACEP's belief that the optimal entry point for government and GNPC is to enforce the contract and its work obligations and remain available to exercise its pre-emption rights if Aker exits. Again, a purchase decision by GNPC should be based on an independent 2P reserve audit to determine the true value of the asset.

**2. Eni block 4 discovery-** In June 2021, Eni made a second discovery (Eban discovery) on its Cape Three Point (CTP) Block 4 licence following the Akoma discovery in 2009. The Eban-Akoma complex has an estimated reserve between 500 Mboe and 700 Mboe, with an upside potential after appraisal. As a result, the company proposed a fast-track development with a subsea tie-in to the FPSO John Agyekum Kufuor, increasing Ghana's oil output to fill in the declines from other fields. However, this proposal has not scaled regulatory lethargy. In contrast, the *Baleine 1X* discovery by Eni in Ivory Coast, which was made three months after the Eban discovery, has received the regulatory approval for greenfield development to produce oil by the end of 2023.

**3. Springfield Afina discovery —** In December 2019, Springfield E&P made the Afina-1 discovery which increased the company's discovered oil and gas potential to about 1.5 billion barrels and 0.7tcf of gas. The Afina-1 discovery was a significant milestone for an indigenous upstream E&P company. However, the post-discovery work programme has stalled pursuant to the Ministry of Energy's directive for the Afina discovery to be unitised with the SGN fields. The directive has resulted in protracted court cases locally and recently in the International Court of Arbitration in London. Eni, which operates the SGN field, contests the claims of straddling by the government and Springfield. True to ACEP's position, the route chosen to litigate the claims in court further delays the field's potential, which could have been resolved scientifically. The cost of the delays to Ghana far outweighs the cost of deploying the scientific measures (~\$10 million) to establish connectivity of the two fields to warrant unitisation. Consequently, the state loses regardless of the outcome of the legal tussle, having dragged this process for about three years.

Beyond the three potentials, activities in the upstream sector have been slow. Many of the existing block holders have been inactive. ACEP has periodically highlighted the lack of capacity of most companies to deliver on their obligations, which by law should attract sanctions. However, these companies continue to hold on to the blocks without delivering on the terms of the Petroleum Agreements.

The regrettable challenge identified by capable upstream companies is that “*...in Ghana things don't get done...*” The optics have overshadowed actual promotion and development in the sector. In 2018, Ghana went through its first competitive licencing round. By September 2019, two companies emerged as winners of two oil blocks. Interestingly, the final negotiations have entered their third year because the government is negotiating for terms that were not part of the bid conditions. **In a sad twist, the Minister of Energy recently announced that Ghana will give all available blocks on direct negotiation. This posture ignores the fact that competitive bidding is not the problem for the inactivity in Ghana, but politics and lack of enforcement of transparency measures passed into law.** In the current context of the upstream sector, the investing companies feel frustrated while the inactive companies remain patronised.

The government needs to note that reserve addition is critical for the sustainability of every aspiration tied to the oil and gas sector. There can be no local content if fields are not being developed. Again, the sector's contribution to GDP cannot improve if there are no additional developments in the upstream sector.

## 4.2 GNPC 7% acquisition in Jubilee and TEN

Last year, GNPC acquired a 7% interest in Jubilee and TEN oil fields from Occidental (Oxy). ACEP supported this acquisition for two reasons

- 1. Transparent and efficient market-based process for valuing the asset.** Kosmos Energy negotiated the assets of Oxy based on an independent assessment of the reserves, although Kosmos has been part of the joint venture on the two fields. This independent assessment achieved a price of about \$5 per barrel for a producing field, 40% lower than the price achieved by GNPC for the sale of the undeveloped DWT/CTP block proposed by Aker Energy.
- 2. Immediate cash flow for government with less than three-year payback.** The two fields are already in production with lower investment risk. Additionally, recovery of investment starts immediately after purchase. The ready cash flow of about \$300 million annually was also important for the government to plug part of the loopholes in the national budget under the existing revenue management structure.



However, ACEP maintains that government processes breach the law and do not take advantage of the acquisition to benefit the state directly. The Ministry of Finance used tax revenue from Oxy to pay for the acquisition of the interest without appropriation. ACEP's prompting of the breach of the Constitution and the PRMA on oil revenue appropriation has not yielded the needed remedy to the breaches. GNPC is further encouraged by the inaction to keep the 7% in the Cayman Islands through a foreign entity, Jubilee Oil Holdings, without transferring the interest to Explorco, as earlier communicated by the Corporation.

The question of why the Ministry of Finance would support ringfencing of the 7% interest (about GHS2.1 billion) away from the budget in the face of critical economic challenges remains difficult to comprehend. Much the same way, the neglect of parliament to ensure the appropriation of the tax revenues before expenditure introduces a significant risk to public financial management.

## 5.0 Gas Sector Priorities for Ghana

Gas has become an integral part of Ghana's development, particularly in the power sector. Most thermal power generation plants currently rely on gas as the primary fuel source. Gas introduces significant benefits to Ghana's power sector for the following reasons;

1. It is cheaper than liquid fuels used in the past for thermal power generation.
2. It offers a more stable long term price option for fuel supply to the power sector.

These benefits are a function of the contractual arrangements for sourcing, over the long term, domestic sources of gas and imports from Nigeria. The domestic sources come from the Jubilee and TEN fields, operated by Tullow Ghana Ltd, and Eni's Sankofa Gye Nyame (SGN) field. In addition, Ghana imports gas from Nigeria through the 600km West Africa Gas Pipeline (WAGP).

The outlook of gas supply has been in contention since 2016 when a stronger commitment was made to source Liquefied Natural Gas (LNG). Government and GNPC believe that the existing sources are not enough to meet gas demand in the country, a justification for importing LNG. On the other hand, independents have held that such a need is overestimated. Indeed, if the government's assumptions for augmenting existing sources with LNG in 2020 had materialised, Ghana would have paid about \$500 million in the past two years for LNG for gas not needed. Thus, Ghana has only been lucky with unanticipated delays in completing the LNG terminal in Tema.

The risk of committing to a long-term LNG contract remains unmitigated as GNPC expects the first cargo of LNG within the second quarter of 2022. This introduces two implications; dampening investment in the country's domestic gas sources, and the country's exposure to the volatility associated with LNG prices.

### Dampening investment in domestic gas sources

The recent geopolitical issues and their impact on global commodity prices underscore the need for Ghana to focus on developing its domestic gas assets, which require investment. The decision to import gas has implications for how much investment Ghana can attract for domestic production and the ability of the country to optimise existing infrastructure, which is contrary to the communicated capacity of domestic sources by the operators, Tullow Ghana and Eni.

In the 2021 annual report of Tullow Ghana, the company indicated that “*...The Group’s investment in upstream gas handling infrastructure on the Jubilee FPSO and the ability to supply comingled Jubilee & TEN gas gives Tullow confidence that it can meet growing domestic demand and be the most competitive supplier of gas into the Ghanaian market...*”

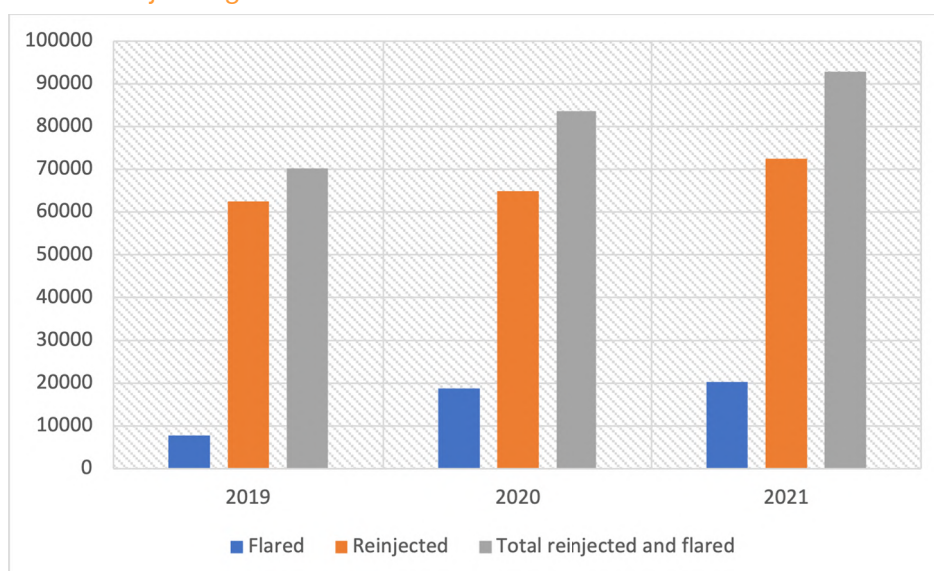
This, however, requires investment in upstream gas production and midstream gas processing infrastructure. Therefore, if the risk level is high, investments will either come at a higher premium or may not.

The government’s plan to expand the existing Gas Processing Plant (GPP) has been on the drawing board for many years. The expansion plan was to receive additional gas from the Jubilee/TEN fields and other discoveries. Instead, gas that could have been used for power generation and other industrial use is either flared or reinjected because the capacity of the existing GPP cannot process the additional gas from the fields.

**About 246 bcf of gas was either flared or reinjected between 2019 and 2021.** Out of this quantity, about 46.8 bcf was flared while 199.8 bcf was reinjected. The flared gas from Jubilee and TEN fields could account for a daily supply of about 50mmscfd if the GPP were expanded as scheduled. In addition, the cumulative volume from reinjected and flared gas could provide an additional volume of over 100mmscfd from the Jubilee and TEN fields, enough to meet Ghana’s medium-term gas needs.

Again, gas delivered from the expanded GPP to power plants and non-power users could be another revenue-generating source for the upstream gas sector. The total flared volume of 47 bcf accounts for a forgone gross revenue of about \$300 million in addition to the allied benefits as indicated above.

**Figure 3: Flared and re-injected gas volumes from Jubilee and TEN fields from 2019 to 2021**



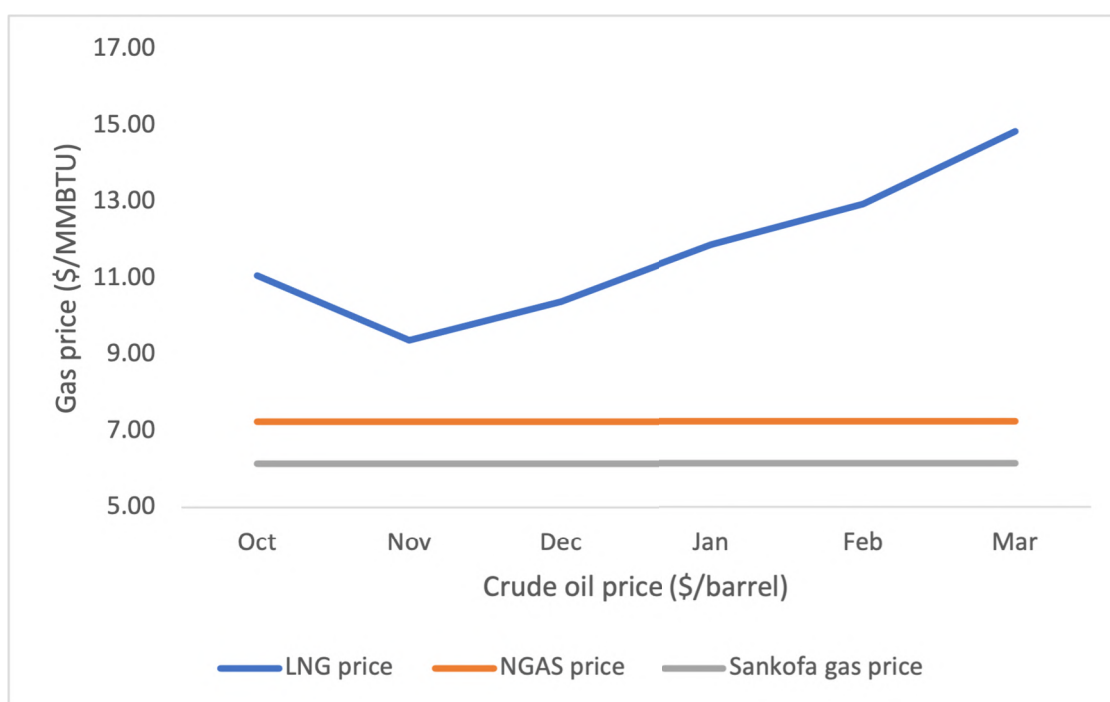
The SGN field has been supplying about 210mmscfd of gas, significantly above the take or pay commitment of 159mmscfd. The existing infrastructure on the field also has an estimated capacity of about 260mmscfd without additional investment, providing an extra volume of 50mmscfd from SGN. Again, other discoveries in the area, such as the Akoma and Afina discoveries, require investment for appraisal and possible tie-in to the FPSO J. A. Kufuor.

The current developments in Ghana's upstream have the potential to meet Ghana's gas demand. Therefore, the government's focus must be to optimise those resources rather than imports. Optimising domestic sources provide a wide range of fiscal and non-fiscal benefits to the state. These include job provision, local content development, technology development, and increased government revenue from corporate taxes, PAYE, tax on services, etc.

## Price risks of LNG

The Gas Sales Agreement (GSA) between GNPC and Shell for LNG supply is benchmarked against the price of Brent Crude, which introduces significant volatility to the pricing mechanism in Ghana. Figure 4 below shows that oscillating crude price affects LNG price under the GSA. Currently, delivered LNG would cost GNPC about \$15/MMBtu. The LNG price is more than twice the most expensive gas from existing sources. Given that the power sector is a major consumer of gas, the \$15/MMBtu price will have to be absorbed by the power sector through increased tariffs or subsidies by the government.

Figure 4: LNG price compared with gas prices from Sankofa and NGAS



Committing to a volatile source for a developing country would have significant implications for the predictability of performance and growth of the productive sector. It also increases the government's risk of subsidising the gas price when LNG prices significantly increase above what the economy can absorb on a full pass-through.

## 6.0 Institutional Inefficiency

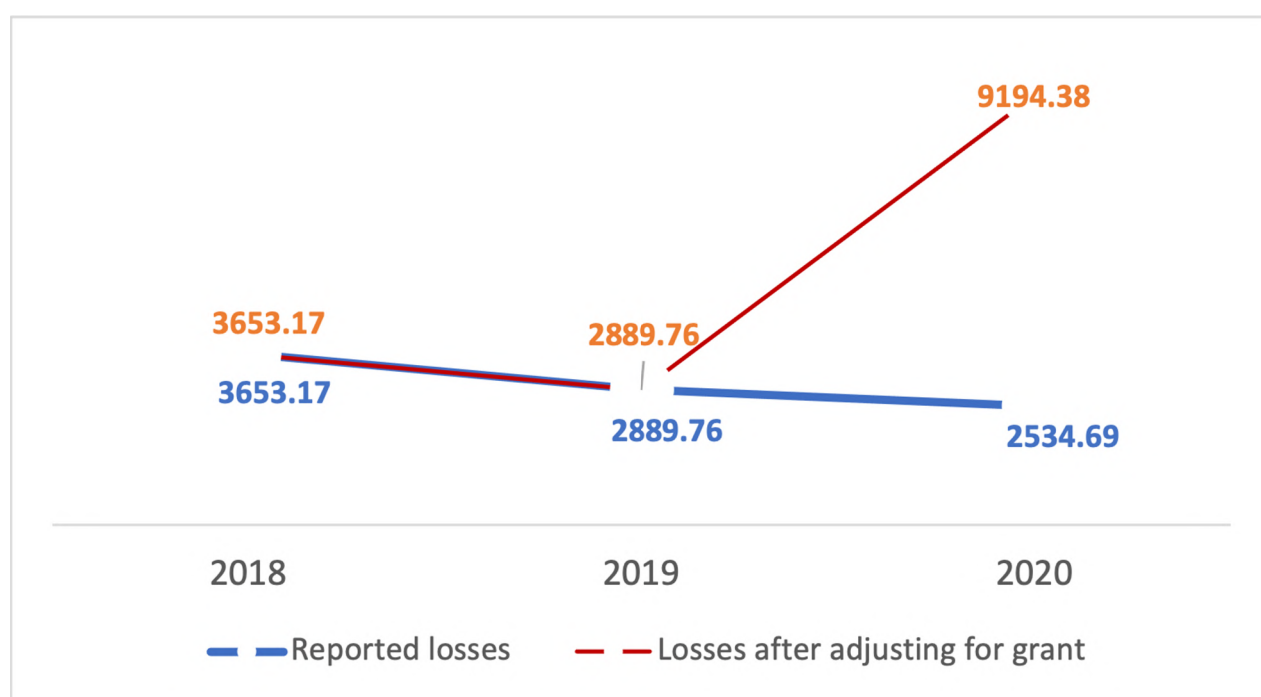
The recent State Ownership Report (SOR) has revealed again how bad it is for government to continue to conduct business, particularly in areas where it is supposed to regulate. The energy sector maintains the top spot on the hierarchy of waste generation sectors. Many of the state-owned enterprises in the energy sector have, over the years, accumulated net losses and debts, although some of these companies receive levies that petroleum consumers pay to ensure the settlement of these debts. Between 2018 and 2020, annual cumulative losses of energy sector SOEs averaged about GHS 3 billion, according to the SOR. Companies such as BOST, NEDCo, TOR and VALCO have made successive losses over the period under review.

TaTable 1: Net profit/loss of energy sector SOEs between 2018 and 2020

SOE	2018	2019	2020
BPA	238.1	209.7	314.1
BOST	-211.63	-101.41	-291.02
ECG	-2266.47	-1465.58	181.4
GNGC	183.04	81.58	217.46
GRIDCo	-104.57	44.85	254.26
GNPC	539.2	204.35	-1618.82
NEDCo	-315.4	-343.31	-379.02
TOR	-382.73	-539.82	-159.12
VALCO	-152.27	-312.52	-86.71
VRA	-220.1	-127.12	156.5
Net gain/loss	-2692.83	-2349.28	-1410.97
Cumulative losses	-3653.17	-2889.76	-2534.69

The 2020 SOR reveals that energy sector SOEs made a cumulative loss of about GHS 2.5 billion. These losses came from BOST, NEDCo, TOR, GNPC and VALCO. The report further shows that ECG recorded a positive net profit in 2020 after successively recording losses in previous years. However, further interrogation of the report indicates that ECG's net profit emanates from the government's settlements on behalf of the company, amounting to about GHS 6.8 billion to IPPs, which it describes as a "grant." Controlling for this grant (debt paid by the public) results in a net loss of over GHS 6.6 billion for ECG alone, contrary to ECG's reported net profit of GHS 180 million. This pushes the cumulative net loss for energy sector SOEs to over GHS 9.1 billion. The trend is repeated in the 2021 financial year, where the government made similar payments to the power sector for under-recoveries, as explained above.

Figure 5: Energy sector reported losses vs actual losses (adjusting for government's payment on behalf of ECG)



The causes of these untold losses crippling the SOEs are multifaceted. However, primary among them is the influence of political actors in the companies' operations, which has negatively impacted the efficiency and effectiveness of these state institutions. The appointment of CEOs and Directors of the companies is largely based on political affiliation rather than merit. **The CEOs and board members of these companies change with changes in government, and this has been the practice in previous regimes. The appointments have become part of the political reward system rather than a necessary intervention to protect the public interest.**



Additionally, an emerging trend of increased administrative bureaucracies without a commensurate return to the state is contributing to the poor state of the SOEs. For instance, GNPC has increased its staff strength almost three-fold (from about 250 to about 650), Petroleum Commission (from about 90 to 350), and BOST (340 to about 600). Similar developments can be found across all the agencies. Additionally, complex organograms with many senior positions have become a new normal in these agencies. Almost all the agencies now have deputy CEOs averaging two to three without performance-based justification.

There is an urgent need to restructure the energy sector institutions. Agencies that can be efficiently managed by the private sector and regulated by the state do not need to exist, as government agencies are susceptible to political interference and the generation of unwarranted losses. There is also the need to examine all energy sector SOEs with clear and trackable Key Performance Indicators (KPIs) to warrant continuous public investments.

## 7.0 New Trend of State Participation in the Mining Sector

Significant changes have been introduced into the mining sector to inject government participation and control into the value chain. The assumption is that state participation will increase value to the state. Consequently, the government has established three investment vehicles to promote state participation and investments in the mining sector; Ghana Integrated Aluminium Development Corporation (GIADEC), Ghana Integrated Steel Development Corporation (GISDEC) and Mineral Income Investment Fund (MIIF).

This development philosophy may have worked in some jurisdictions. However, the context in Ghana depicts a general historical non-performance of state-owned businesses. Particularly in the extractive sector, rent-seeking behaviour undermines the state interest. Post-independence governments, between 1957 and 1980, adopted similar ideologies through the establishment of many state-owned mining companies, such as the State Gold Mining Corporation (SGMC) and Ghana National Manganese Marketing Corporation (GNMC). Ghana also embarked on acquiring significant stakes in Ashanti Goldfields, Ghana Bauxite Company (BAC) and Ghana Consolidated Diamonds Company.<sup>4</sup>

These interventions led to the critical need for policy reversal in the 1980s because the companies failed to actualise the aspirations reposed in them by the state. Some of the causes of the failure, as described by the World Bank, are even more embarrassing;

*“...high absenteeism and low worker discipline; and pilfering, illegal panning and smuggling of gold and diamonds...”*

The recent state ownership reports show that the trend in the failures of many state-owned enterprises has not changed. There is no policy clarity on how these new agencies would differ to attract the needed investment in mining. Already, the performance of these entities is exposing the quality of assumptions made for their establishment.

### GIADEC

GIADEC's ability to attract investment has been hampered significantly by the lack of adequate data on the bauxite deposits. Consequently, GIADEC has formed a partnership with Rocksure International for reconnaissance activities which it hopes to develop into a joint venture.

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<sup>4</sup> Akabzaa, T. & Darimani, A. (2001). Impact of mining sector investment in Ghana: A study of the Tarkwa mining region.

The inability to produce and refine the bauxite as planned further jeopardises Ghana's ability to respond to its commitments under the Sinohydro barter arrangement, which requires alumina to repay the disbursed funds.

Additionally, the government's interest in VALCO has been handed to GIADEC. VALCO has been a loss-making SOE for many years. Between 2018 and 2020, the company made a cumulative loss of about GHS 550 million. The key challenges VALCO faces, in addition to management, are the inefficiency of the plant and the unavailability of cheap power to offset the plant's inefficiency. ACEP's analysis of the integrated aluminium industry shows that for VALCO to operate optimally and compare with efficient smelters, it requires power at 2.9 cents per kwh, given that it consumes between 16–17 MW per tonne as against 12–13MW per tonne consumed by other efficient smelters. This further exposes GIADEC to more significant uncertainties.

## ***GISDEC***

GISDEC, on the other hand, is yet to show noticeable progress on its mandate since its establishment in 2019. In the meantime, they continue to depend on government subventions for their existence. In 2020, GISDEC received about GHS 13 million funding to account for staff costs and goods and services.

## ***MIIF***

MIIF was established in 2018 to monetise the country's mineral income and has the power to create a special purpose vehicle to make strategic investments in the mining sector. In 2021 government assigned about 80% of the country's mineral royalties, amounting to about GHS1.3 billion, to MIIF for strategic investments in the mining sector on behalf of the country.

Recently, MIIF has bought about 14 million shares in Asante Gold Corporation, worth about \$20 million. However, it is not clear whether MIIF intends to be a dividend reliant long-term investor or it intends to cash in on capital gains through short term trading. If MIIF intends to be a long-term equity player, it will rely on dividend payments that depend on the project's profitability. On the other hand, if MIIF wants to cash in on capital gains, it requires a robust trading arm which can examine the market and determine when to exit. These notwithstanding, each decision exposes the country to additional financial risks resulting from market uncertainties. Also, the gains to the government from the operations of MIIF will depend on its governance and operational efficiency.

The establishment of MIIF to invest risk-free royalty introduces significant risks to revenues that could have been used to address pressing and urgent development needs such as roads, hospitals and schools. For example, the assignment of GHS 1.3 billion to MIIF is about 43% of the country's capital investment in health, education, roads, agriculture, and gender. Additionally, the royalties assigned to MIIF are generated from large scale mining companies that account for about 98.5% of revenues from mineral production. MIIF's ambitious programme to invest in small scale gold mining does not address the challenge to revenue generation from the subsector. Indeed, the challenge to revenue collection from small scale mining is not necessarily a result of inadequate investment but broader systemic and governance challenges (political and institutional malfunctions) that are out of the control of MIIF, further increasing the risk for MIIF's investment.

The risk is even heightened by recurrent underperformance of state enterprises. In 2020, the government's fiscal exposure to SOEs amounted to about GHS 21.5 billion, about 30% of Ghana's domestic revenue, 6% of nominal GDP and 700% of capital investment in agriculture, education, health, roads and gender. **The blend of the non-performance of SOEs and the history of government investment in mines provide sufficient evidence that the opportunity cost of sacrificing social investments for these enterprises is worth re-examining.**

## 8.0 Conclusion and recommendation

Restructuring the energy and extractive sectors is urgent for the transformation and resolution of the current dire economic context. Though ACEP does not see the resolution of the sectors' challenges as a silver bullet for addressing all governance challenges in the country, it can be argued that no solution is sustainable without addressing the issues; high fuel cost, decisions on gas imports, investment attraction in the upstream oil sector, energy sector debt accumulation, institutional inefficiency and deepening public participation in businesses with constrained economic promise.

Addressing the challenges could free resources for development and realign government priorities towards growth. It remains injurious for billions of debts to be created in the energy sector, whose value exceeds direct investment in infrastructure. For example, the \$1.2 billion spent to pay for under-recoveries in 2021 in the power sector alone could have been useful for building roads and other critical infrastructure.

The avoidable energy sector challenges are choking the economy and require urgent steps to address the situation. ACEP recommends the following actions for governments attention:

### Petroleum prices

The high cost of petroleum has implications for the economic growth and productivity of citizens, particularly in the Ghanaian context, where options for transportation are limited and almost entirely reliant on petroleum products. This creates a substantial negative impact on many sectors of the economy despite the difficulty in immediately quantifying how rising costs of petroleum products undermine growth.

1. Government must engage broadly to look beyond the fiscal gains to effectively prioritise the levies, taxes and margins on petroleum products to identify the areas where further cuts are possible. In the short term, a further review of the SPT, UPPF, FMM, PDM and BOST margins is critical to passing on relief to the public.
2. The government must address the long-term macroeconomic challenges that impact the local currency's stability, particularly focusing on import substitution and reducing the overdependence on raw-material exports (gold, crude oil, cocoa) for foreign exchange.

## Power sector

The power sector remains unsustainable and a major threat to economic growth. Therefore, urgent steps are required to stop the debt accumulation and settlement of existing debt more sustainably.

1. The government must immediately decide whether it wants to invest substantially in the distribution segment of the value chain or invite the private sector in a transparent manner. ACEP believes the latter is a more viable option, considering that the government is fiscally constrained to inject the needed capital.
2. Government must re-examine efforts to add generation, particularly from old plants running their course in Ghana by relocating them to Kumasi. The optimal short-term measure to improving supply reliability in the middle belt is to invest in upgrades of the transmission infrastructure to allow power to be wheeled from the existing generation points at a minimal loss.

## Upstream investments

Generally, upstream investments have slowed, owing to peculiar contextual challenges that must be addressed immediately and transparently.

1. Government must immediately conclude the negotiations on the 2018 Bid and Licensing Round, where Eni and First E&P emerged as successful bidders. The delays in negotiations undermine the trust and robustness of the bid process, which has implications for future bid processes which remain the optimal mode, rather than the new proposal to award blocks through direct negotiation.
2. Government must insist on compliance with the minimum work obligations of upstream companies who have been assigned blocks. The lack of enforcement encourages speculation by inefficient companies whose principal desire is to hold on to the blocks.
3. Government must act swiftly to diffuse the perception that “...things do not get done in Ghana...” by engaging stakeholders and learning from other competitive regimes.
4. Government must immediately ensure that the 7% acquisition by GNPC is relocated to Ghana from The Cayman Islands and ploughed into the budget under the PRMA.

## Gas sector

The current gas demand and supply situation requires urgent action to fine-tune plans and actions to optimise domestic sources and unlock more benefits for the country, rather than increasing the country's exposure to risk on imported gas, particularly take-or-pay LNG.

1. Government should broadly and openly engage stakeholders in stabilising domestic production, at least for the medium term. This engagement will help extract openly from existing investors how much investment commitment they can make to stabilise gas supply from domestic sources.
2. Government must ensure that GNPC reviews its LNG import plans. Given that the regasification infrastructure has been developed, GNPC must decouple the infrastructure from the commodity supply. This reduces the government's liability to the cost of regasification which averages about \$1/MMbtu globally.

## Institutional efficiency

The management and functions of the state's energy sector institutions require urgent review to reduce the government's exposure to losses.

1. The State Interests and Governance Authority (SIGA) must accelerate its review of the performance of SOEs and determine which SOEs require divestiture, particularly those competing with the private sector in areas where regulation can achieve the same result.
2. SIGA must immediately reform the appointment, recruitment and other corporate governance practices to conform with acceptable corporate standards.

## State participation in the mining sector

The new attempt to establish vehicles may be well-intentioned. However, it raises significant risks and challenges, particularly within the current fiscal context and the performance of state enterprises.

1. Government must focus its investment of risk-free royalties on socio-economic development rather than the high appetite for risks in the mining sector through MIIF.
2. Government must consider merging MIIF and the Ghana Investment Infrastructure Fund (GIIF) to at least cut down on administrative expenses (about GHS 50 million a year).
3. Government must focus on creating an enabling environment to attract investments (domestic and foreign) in the mining sector and improve the regulatory functions (fiscal and compliance) to shift the production risk to the market.



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