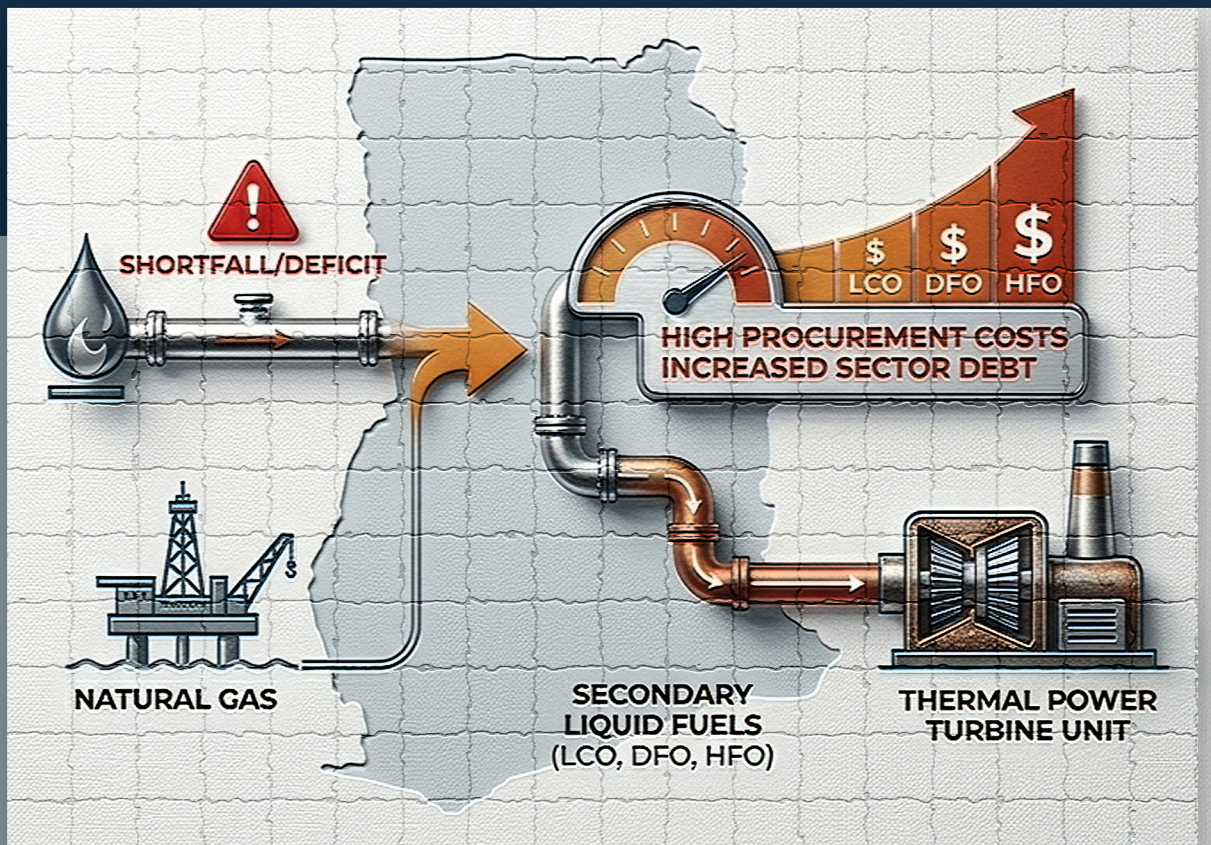




# NATURAL GAS SUPPLY SHORTFALLS

## and Escalating Reliance on Expensive Liquid Fuels (LCO, DFO, and HFO)



**ASSESSMENT OF UTILIZATION PATTERNS  
AND COSTS IN GHANA'S POWER  
SECTOR (2021-2025)**

## Executive Brief & Credits

Consistent natural gas shortfalls have forced Ghana's dual-fueled thermal plants to rely heavily on expensive liquid fuels (LCO, DO, and HFO). In 2025 alone, this reliance created an unbudgeted cash drain of US\$19.16 million every month (totaling US\$229.89 million for the year). US\$229.89 million for these alternative fuels are omitted from consumer electricity tariffs, in pane pattern continuously drives massive structural debt within the power sector.

## Document Tracking

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[info@cemseghana.org](mailto:info@cemseghana.org)



# INTRODUCTION

Ghana's energy sector, especially its power sector, has undergone significant development and structural changes over recent decades. The sector is characterized by a combination of traditional hydroelectric power and thermal (fossil fuel-based) generation, with increasing attention to renewable energy integration to meet growing demand and sustainability goals.

The thermal generation continues to dominate the power sector with about 3445 MW of dependable capacity representing 70% of total dependable capacity as at 2025. About 80.0% of 3445 MW of dependable capacity are dual-fueled, with their primary fuel being natural gas and secondary fuel being liquid fuel including Gasoil, Heavy Fuel oil (HFO) and Light Crude oil (LCO). The liquid fuels provide strategic options for generations in instances when there are shortfalls in gas supply due to planned and unplanned maintenance of gas facilities.

Liquid fuel are comparatively costly compared to Natural Gas, and especially higher consumption of these fuels exposes the power sector to debts. In this regard, the Center assessed the utilization pattern of liquid fuels from 2021 to 2025, and estimated the costs of Heavy Fuel Oil and Gasoil within the period.

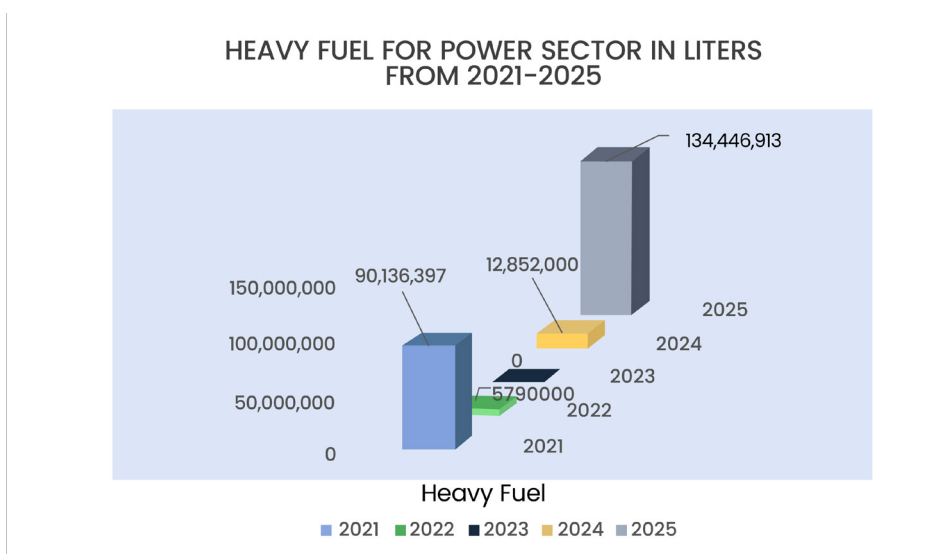
# METHODOLOGY

Ghana uses three main types of liquid fuels including LCO, HFO and Gasoil. The Center sourced data on HFO and Gasoil from the National Petroleum Authority (NPA) from 2021 and 2025. The data from NPA were utilization data based on liters and metric tonnes. The estimated cost per metric tonnes of Heavy Fuel Oil (HFO) and Diesel Fuel Oil (DFO) were based on GRIDCO cost estimates in their Fuel Supply Outlook for the WAGP Piggling from January to February 2025. Crude oil data was sourced from the Bank of Ghana from 2024 to 2025. These data already had their established costs published by the central bank. Thermal plants that were run by LCO in the period include AKSA energy, Cenpower and Asogli as indicated by the Bank of Ghana.

## RESULTS

The heavy fuel oil for the power sector peaked in 2025 with about 134 million liters (133,237 MT) utilized by the power sector, followed by 2021 with about 90 million liters (89,325 MT) in 2021. No HFO was used for the power sector in 2022. However, there was increment of about 120,537 MT between 2024 (12,736 MT) and 2025 representing about 947% surge in the utilization of HFO for power generation in 2025.

**Figure 1:** Heatvy Fuel Oil for Power Sector from 2021 to 2025



**Source:** CEMSE Construct from National Petroleum Authority Data

Based on the Ghana Grid Company Limited (GRIDCO) fuel requirement during WAGP Offshore pigging and cost per metric tonne in their projections, the Center estimated the cost of HFO for 2025. GRIDCO estimated the cost of HFO at US\$605/MT for the period. The total volume of HFO consumed by the power sector in 2025 is 133,237MT implying that cost of HFO for the sector in 2025 is US\$80,608,385 (see Table 1).

**Table 1: Estimated Cost of HFO consumed in 2025**

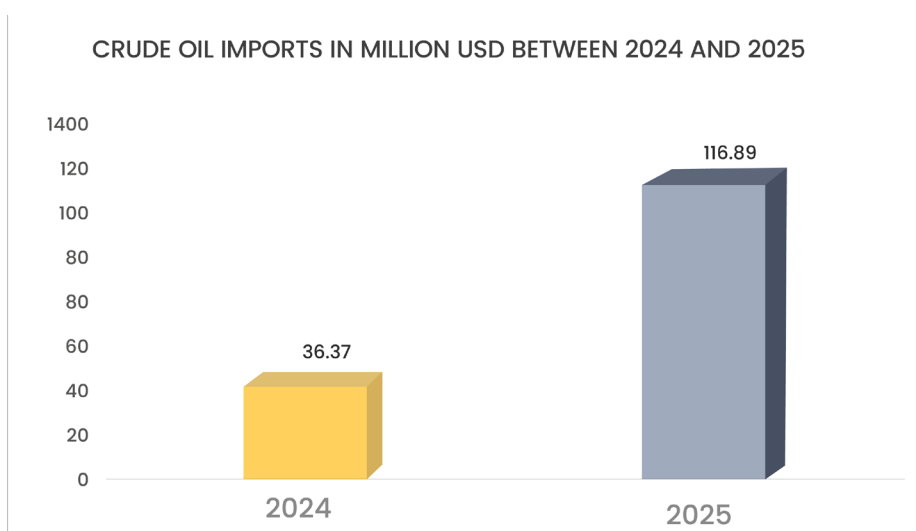
Heavy Fuel Oil	Quantity (MT)	Cost (US\$)	Total Cost (US\$)
Projected (GRIDCO)	19,800	605.05	11,980,000
Actual	133,237	605.05	80,608,385

**Source:** CEMSE Construct from GRIDCO and NPA Data, 2025

The GRIDCO projections covered the fuel requirements during WAGP pigging. The 575% increase in the cost of HFO for the year 2025 implies that beyond the pigging period in the 1Q25, additional HFO was used run the thermal plants throughout the last three quarters of the year.

The years 2021 and 2022 recorded zero gasoil for power sector. The power sector started using Gasoil in 2023 with about 263 thousand liters (222 MT) and surged to about 8 million liters (7,121 MT) in 2024 representing 3107% increment between the periods. During the period under assessment, utilization of Gasoil peaked in 2025 with about 24 million liters (20,246 MT) representing about 184% increment in the utilization of Gasoil between 2024 and 2025.

**Figure 2:** Gasoil to Power Sector in Liters from 2021 to 2025



**Source:** CEMSE Construct from National Petroleum Authority Data

GRIDCO fuel requirement projections for Diesel Fuel Oil (DFO) during the Offshore pigging of WAGP was 16,800 MT at a cost of US\$26.88 million implying that the cost per metric tonne was about US\$1600. The estimated Cost of DFO by GRIDCO was twice the average cost DFO (US\$800/MT) in 2025. Based on the GRIDCO estimated Cost of US\$1600/MT for DFO and the total consumption of 20,246MT for the power sector in 2025, the actual annual cost was US\$32.39 million (see Table 2). The government procured additional 3446MT representing 21% surge in the consumption of DFO in 2025.

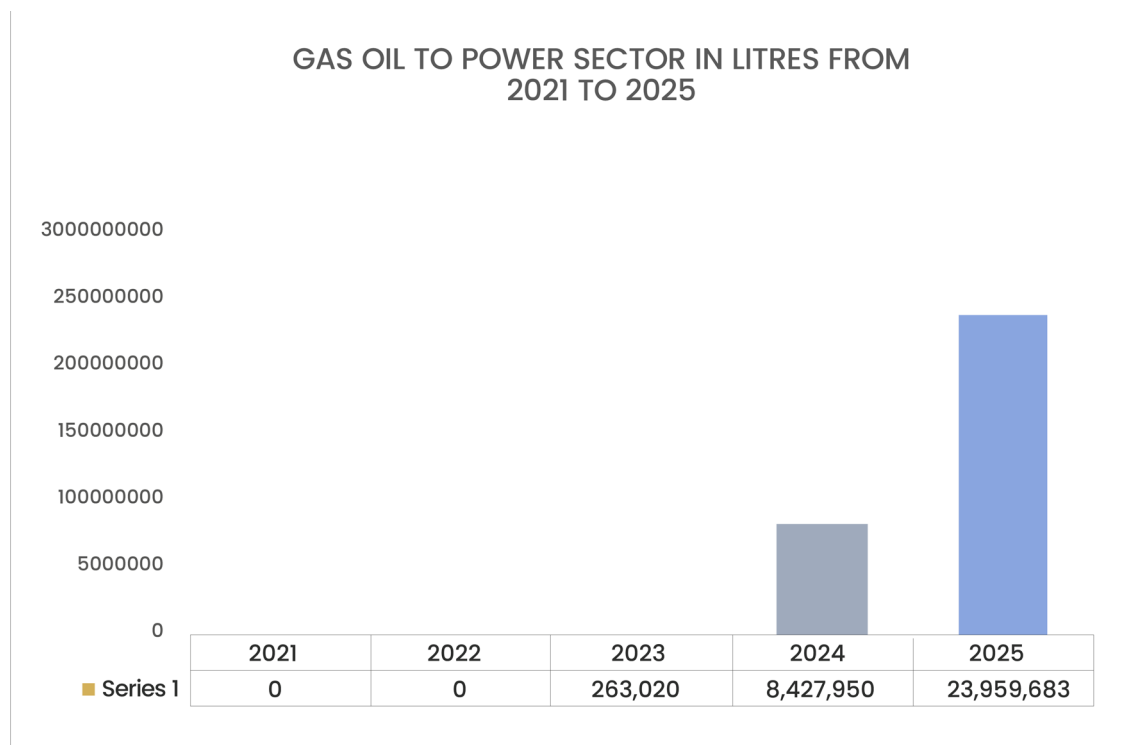
**Table 2:** Estimated Cost of Diesel Fuel Oil in 2025

Diesel fuel oil	Quantity	Cost per MT (US\$)	Total Cost (US\$)
Projected	16,800	1,600	26,880,000
Actual	22,246	1,600	32,393,600

**Source:** CEMSE Construct from GRIDCO and NPA Data, 2025

According to the quarterly bulletin (4Q25) of the Bank of Ghana, an amount of US\$36.57 million was used to import LCO for the power sector in 2024 and in 2025, it increased by about 210% to US\$116.8 million. The actual LCO import of US\$116.89 million is twice the projected cost of US\$50.94 million by GRIDCO. All LCO imported in 2024 and 2025 were allocated to Cenpower Generation, Asogli and AKSA power plants.

**Figure 3:** Cost of Crude Oil imported for the Power Sector in 2024 and 2025



**Source:** CEMSE Construct from Bank of Ghana Data

# CONCLUSION

The analysis reveals a troubling trend in Ghana's power sector which connotes a heavy and growing reliance on expensive liquid fuels (HFO, DFO, LCO) between 2021 and 2025. Despite grid operator projections, actual consumption surged dramatically. The actual cost of HFO surged by about 575%, exceeding Grid projection by about US\$68.6 million. Also, the actual cost of DFO surged by about 21%, exceeding Grid projections by about US\$5.5 million and LCO exceeded Grid projection by about US\$65.95 million representing 129% increment in LCO utilization by the power sector in 2025. The total cost of LCO, HFO and DFO for 2025 is estimated at US\$229.89, implying that government of Ghana spends an average of US\$19.16 each month on other liquid fuels. The increasing reliance on other liquid fuels for power plant is underpinned by shortfall in natural gas supply. Addressing Gas supply deficit reduces sector debts and enhances fiscal sustainability of the power sector in Ghana since other fuels are not captured in the tariff regime and for that matter government must continue to rely on petroleum levies to fund the procurement of these fuels. Also, the findings underscore an urgent need for diversified generation and stricter fuel procurement discipline to prevent further financial distress.

