



GHANA'S LOOMING ENERGY SECTOR CRISIS

● APRIL 2024





DISCLAIMER

The data contained in this report is only up-to-date as of Friday, 5 April 2024. Some of it is subject to change during the natural course of events. SB Morgen cannot accept liability for any errors or omissions that may follow such events that may invalidate data contained herein.

Our researchers employed one-on-one interviews and desk research to collate the available data. Our editors sifted through the data and prepared the report, using various proprietary tools to fact-check and copy-edit the information gathered.

Our publicly released reports are formatted for easy and quick reading and may not necessarily contain all the data that SB Morgen gathered during a given survey. Complete datasets can be made available on request.

All forecasts were built using data from a variety of sources. A baseline of accurate and comprehensive historical data is collected from respondents and publicly available information, including from regulators, trade associations, research partners, newspapers and government agencies.

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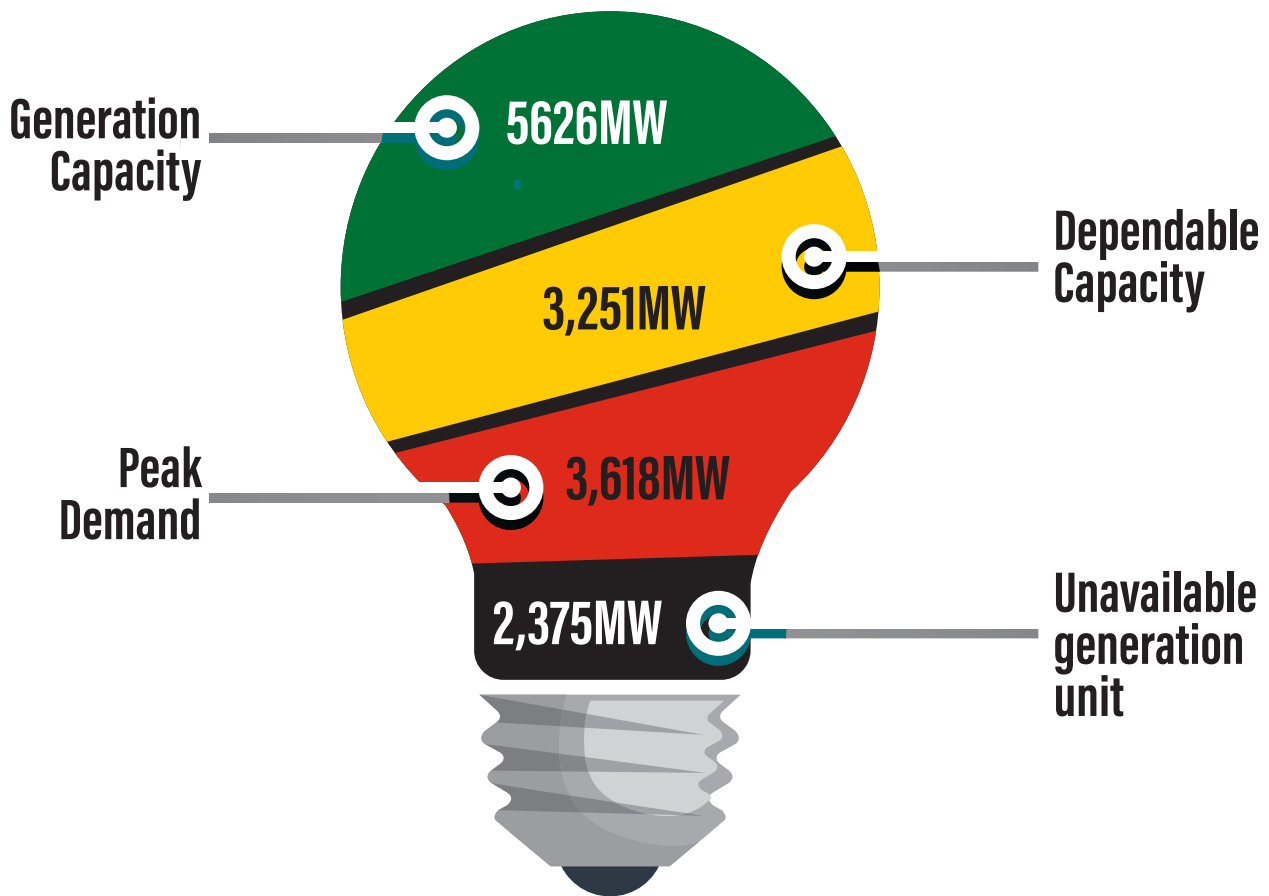
INTRODUCTION

Ghana's energy sector is facing a complex crisis. Despite having an installed capacity that surpasses its peak demand, the country grapples with crippling debt, limited gas supply and ongoing maintenance issues. This confluence of problems translates to a harsh reality for Ghanaians, threatening their economic growth and disrupting their daily lives.

Factually, Ghana's energy sector accrues about \$1 billion in debt annually, with \$500 million from excess capacity charges. Foreign exchange losses occur during debt settlements due to power generation costs being in US dollars while revenue is in Ghanaian cedis. The World Bank estimates Ghana loses over \$680 million yearly from power outages and load shedding. The Electricity Company of Ghana (ECG) reported issuing over 100 power outage notifications for maintenance activities in the first two and a half months of this year in response to a request from the Public Utilities Regulatory Commission (PURC).




Ghana's electricity generation mix



Ghana's dependable capacity has fallen by 2,375 MW primarily due to inadequate fuel supply, maintenance and faults

Source: GRIDCo



According to Ghana Grid Company (GRIDCo), which transmits electricity from generation grounds to ECG, Ghana's current peak demand has surged to 3,618 MW, significantly exceeding the available capacity of 3,251 MW. The curtailment of power exports since 27 March reflects the severity of the situation. With an installed capacity of 5,626 MW, the country only utilises approximately 58% of its total capacity, leaving a considerable deficit of 2,375 MW. This deficit is compounded by a 740 MW shortfall attributed to ongoing maintenance.

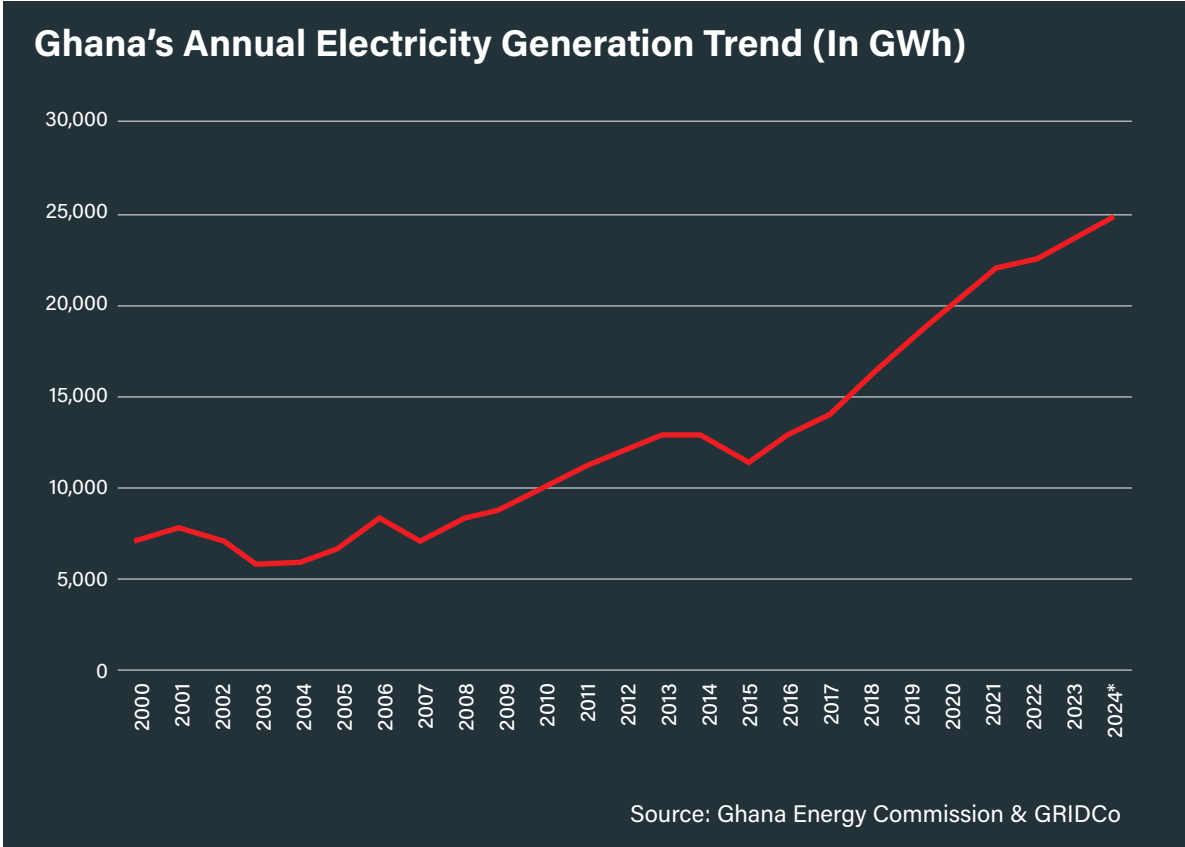
Among the maintenance-related issues, 330 MW remains uncertain regarding restoration timelines, adding complexity to the grid's stability. Additionally, four thermal plants, collectively capable of generating 595 MW, are offline due to inadequate fuel supply. In contrast, a fault in the TICO unit 3 plant has rendered 120 MW unavailable until December 2024, impacting the entire year's power generation by that capacity. Consequently, Ghana faces a significant 1,455 MW shortfall in electricity generation capability, with gas supply limitations exacerbating the challenge. The gap persists despite efforts to reduce power exports by



40% during peak hours to prioritise local demand.

In its 2024 energy sector outlook, the Ghana Energy Commission also warned of potential power outages due to fuel supply restrictions and planned maintenance issues, which could lead to a significant loss of dependable capacity. The Commission estimated that Accra would need around \$1.2 billion to purchase fuel for its predominantly thermal power plants, contributing over 65% of the country's dependable capacity.

Ghana traditionally relied on the West African Gas Pipeline (WAPCo) network to import fuel from Nigeria for its power plants. However, recent foreign exchange challenges and Ghana's inability to meet its debt obligations forced WAPCo to halt fuel supply to Ghana at the beginning of the year. The Energy Ministry revealed that Ghana owed WAPCo approximately \$19 million, and a payment of \$10 million was required upfront to resume services. Despite this payment, Ghana has accumulated another debt, leading WAPCo to hesitate to continue its business relations with the country.



Furthermore, the country's hydroelectric landscape presents mixed outcomes, with the Akosombo dam maintaining stable electricity generation due to its sufficient water levels. In contrast, the Bui dam's declining levels raise concerns. If the downward trend persists, the Bui





dam's ability to generate power could be compromised, leading to its restricted usage to peak hours only. To align generation capabilities with demand, Ghana resorted to shedding 380 MW during normal times and an additional 505 MW during peak hours daily. The primary challenge remains the inadequate gas supply. Meanwhile, idle thermal plants can partially offset the 505 MW shortfall during peak times caused by fuel shortages or equipment faults.

In the face of these daunting challenges, Ghana needs to focus on upgrading infrastructure, diversifying energy sources to reduce reliance on volatile gas prices, strengthening the grid's resilience, promoting energy efficiency programs, and fostering regional partnerships. These steps are crucial to steering the country's energy sector towards a more resilient future.



ABOUT SBM

SBM Intelligence is an Africa-focused market/security intel gathering and strategic consulting firm. It is a leader in strategic research, providing actionable analyses of West Africa's socio-political and economic landscape via practical means. Our team of researchers and data scientists provide the intel that helps governments, businesses, and nongovernmental organisations achieve strategic objectives as they initiate or expand regional operations. Since 2013, we have served clients across various sectors in Africa, France, the UK, and the USA.

