



ENERGY COMMISSION

Securing Ghana's Energy Future Today

Opportunities for Gas Export from Ghana

Current Realities,
Future Prospects, and
Dangerous Mirages



Menu

- Current Realities
- Future Prospects
- Dangerous Mirages





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Current Realities

The Picture Today: Gas Sector Cash Flow

- Non-payment for gas consumed by power generators
 - ECG not [fully] paying for power generated and supplied
 - Power plants not paying GNGC/GNPC for gas supplied
 - GNGC not paying GNPC for gas purchased
 - GNPC challenged in paying for gas offtaken

Unsustainable Value Chain!



The Picture Today: Supply-Demand Balance

Contracted Gas Supplies (MMscfd)					
Year	2019	2020	2021	2022	2023
Total Supply	337	498	627	737	823

Gas Demand (MMscfd)					
Year	2019	2020	2021	2022	2023
Power Sector (Updated IPSMP Ref Case)					
Total Demand (Power)	229	257	266	322	350
Western Region					
Total Non-Power Western Region	26	39	53	63	72
Eastern Region					
Total Non-Power Eastern Region	0	6	19	25	26
Total Non-Power Demand	26	45	72	88	98
Total Demand (Power & Non-Power)	255	302	338	409	448

	2019	2020	2021	2022	2023
Total Domestic Supply	337	373	377	397	393



Key Facts and Implications

- Facts
 - Uncertainty about “bankability” of power sector persists
 - Domestic gas surplus will be over by 2022
 - Policy is to prioritise gas for power sector
- Implications
 - Gas to be exported is primarily imported gas (LNG or WAGP)
 - Consideration of export is driven by circumstance – NOT policy
 - Dysfunctional value chain due to non-payment of domestic power sector
 - Oversupply due to over-contracting
- Exporting previously imported gas is a viable business
 - Gas Hub concept
 - Market driven
 - Service provider model



Gas Export

- Exporting previously imported gas is a viable business
 - Gas Hub concept
 - Market driven
 - Service provider model

Deliberate action required!





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Prospects for Gas Exports

Export Path

- West African Gas Pipeline
 - No/Limited infrastructure costs
 - Limited market – Togo, Benin [and Ivory Coast?]
- LNG Hub
 - Infrastructure already under construction
 - Infrastructure for land transportation already in place
 - Unlimited market, but expensive market development



Export to Ivory Coast

- Reduced scope of export
 - Down to about 10 mmscfd
- Price cap: \$ 5.5-6.0/mmBtu
 - Below our \$6.08/mmBtu level



COTE D'IVOIRE

Lower gas demand undermines case for LNG imports

The success of Société des Energies de Côte d'Ivoire's 275MW Soubré hydro plant has substantially undermined the commercial logic underpinning a proposed 3m t/yr liquefied natural gas (LNG) import terminal in Abidjan's Vridi port (*AE 385/1*). The challenge facing the project's promoters, which include Total, Shell, Golar LNG, Azerbaijan's Socar and Endeavor Energy, is not only to justify a gas offtake price higher than the \$5.5-6.0/mBtu ceiling set by the government, but also to find a market for the gas at all.

When the project was proposed, forecasts for electricity demand growth were projecting that the country would run out of gas, noted an informed source speaking on the margins of the African Petroleum Producers' Organisation conference in Malabo on 4 April. The discovery of more domestic gas, plus the better-than-expected performance of Soubré, means that five years later "the perceived gap for natural gas has fallen from 250-400mcf/d to 10mcf/d. The import project must therefore find other sources of demand if it is to progress. The question is, what is the minimum that would still permit LNG to be viable?" said the source, adding that the project sponsors now need to identify "an alternative market – other customers in the country or the region".

LNG Hub Prospect

"IFC is seeking consulting services to assist in design of an open season process for a fully commercial, FSU-based LNG terminal to be situated within the port of Freetown, Sierra Leone. Expressions of Interest are strictly limited to 10 pages submitted in a single pdf file. EOIs of more than 10 pages will be discarded. The prospective project is conceived of as a break-bulk facility comprising an FSU and a simple spread mooring system, located in one of two possible anchorages in Freetown harbor. The terminal would receive full-size cargos from the global market, and re-load smaller vessels and ISO containers."

- LNG Bulk Road Vehicle delivery infrastructure in place
- LNG FSU/FRU scheduled installation mid 2020
- LNG Import projects planned along West Coast

Energy for Africa's Future...

West Africa LNG Group, Inc. (WA-LNG) is a comprehensive natural gas company specializing in customized turnkey solutions for its customers. WA-LNG is currently in the process of building a large-scale liquefied natural gas (LNG) regasification plant ("Guinea LNG Project.") When completed, the Guinea LNG Project will improve the country's industrial, mining, agriculture and residential sectors through the use of clean and environmentally-friendly liquefied natural gas.



West Africa's first LNG storage and regasification plant inaugurated

By [Joanna Sampson](#) | 21 August 2019



A first for West Africa, a new LNG storage and regasification plant was inaugurated this week in Equatorial Guinea.

The new plant is being built at the Port of Akonikien, on Equatorial Guinea's mainland, by local contractor Elite Construciones.

BP, Kosmos plan FID for West African LNG project this year

CH2M wins West African LNG project job

KBR wins pre-FEED work on West African LNG project

Prospects for Export

Credible export opportunities, but:

- Price Sensitive
- Time Sensitive
- Targets have/will have options (buyers market?)

Must be a truly commercial approach!





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Mirage Ahead

Risk of Oversupply...

- Learn lesson from excess power generation procurement
- Avoid repeating with Gas Purchase/Sale contracts
 - Speculative, unrealistic gas demand expectation is dangerous
 - “Wait and see”, or “Hope for the best” is a poor strategy
 - The Oasis on the horizon is almost always a mirage
 - The looming problem however will not go away
 - “Renegotiation” is not a solution to “poor choices”
 - Gas Export is not a “last minute” option



Summary

- Opportunity for gas export recognised
 - Pipeline or LNG
 - Competitive (not captive) and price-sensitive market
- Clear gas export strategy required
- Must ensure gas sector is market responsive
- Must urgently resolve cash flow constraint
- Over-procurement can lead to distress situation

